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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,655	12/04/2003	Yasuo Murakami	TGW-0203	5851

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EXAMINER

MCDONALD, RODNEY GLENN

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,655

Applicant(s)

MURAKAMI ET AL.

Examiner

Rodney G. McDonald

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 10-14 and 21-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03, 11/04, 12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 10-14 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 is indefinite because "said power source device(s)" lacks antecedent basis.

Claim 11 is indefinite because "said detector" and "detector" lacks antecedent basis.

Claim 12 is indefinite because "said detector" and "detector" lacks antecedent basis.

Claim 13 is indefinite because "said cathodes" lack antecedent basis.

Claim 14 is indefinite because "said cathodes" lack antecedent basis.

Claim 21 is indefinite because "said detector" and "detector" lacks antecedent basis.

Claim 22 is indefinite because "said detector" and "detector" lacks antecedent basis.

Claim 23 is indefinite because "said cathodes" lack antecedent basis.

Claim 24 is indefinite because "said cathodes" lack antecedent basis.

Allowable Subject Matter

Claims 1-9 and 15-20 are allowed.

Claims 10-14 and 21-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-7 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter including a drive device for locating the shield member selectively in a shield position between the vapor source and the holder, and a retracted position shifted from the shield position; a detector detecting turn-on/off of vacuum arc discharge of the vapor source; and a control portion controlling the drive device to locate the shield member in the shield position when the detector detects turn-off of the vacuum arc discharge, and to located the shield member in the retracted position when a time required for stabilizing vacuum arc discharge elapses after the detector detected turn-on of the vacuum arc discharge.

Claims 8-14 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter including drive device for the shield members; detectors detection turn-on/off of the vacuum arc discharge of the vapor sources, respectively; and a control portion, wherein each of the shield members is movable to and from a position between the corresponding vapor source and a holder supporting the deposition target object, and each selectively in a shield position between the vapor source and the holder, and a retracted position retracted

Art Unit: 1753

from the shield position, and the control portion controls each of the drive devices to locate all of the shield members in the shield position when at least one of the detectors detects the turn-off of the vacuum arc discharge, and to locate all of the shield members in the retracted position when a time required for stabilizing all the vacuum arc discharges elapses after all of the detectors detected the turn-on of the vacuum arc discharge.

Claims 15-19 are indicated as being allowable over the prior art of record because the prior art of record does not teach a detector detecting turn-on/off of vacuum arc discharge of the vapor source and a control portion controlling the power source device to stop energizing of the solenoid coil when the detector detects the turn-off of the vacuum arc discharge, and to energize the solenoid coil when a time required for stabilizing the vacuum arc discharge elapses after the detector detected the turn-on of the vacuum arc discharge.

Claims 20-24 are indicated as being allowable over the prior art of record because the prior art of record does not teach the claimed subject matter as claimed including detectors detecting turn-on/off of the vacuum arc discharge of the vapor sources, respectively; an a control portion, wherein each of the magnetic filters has a solenoid coil to be energized by the power source device for forming a magnetic field, and the solenoid coil forms a magnetic field controlling dispersion of an ionized cathode material produced from the cathode by the vacuum arc discharge to move the ionized material toward the holder, and the control portion controls the power source devices to stop energizing of all of the solenoid coils when at least one of the detectors detects the

Art Unit: 1753

turn-off of the vacuum arc discharge, and to energize all of the solenoid coils when a time required for stabilizing all of the vacuum arc discharges elapses after all of the detectors detected the turn-on of the vacuum arc discharge.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

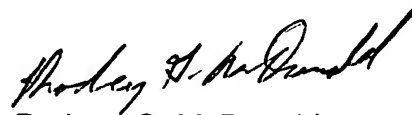
Miyake et al. (Japan 2002-294433) teaches a magnetic control device for controlling the magnetic field so as to control the location of an arc and steer ionized cathode materials. Miyake et al. fails to teach a control device which turns off all the coils when the vacuum arc discharge is turned off and fails to teach a control device which energizes all the solenoid coils when a time for stabilizing the vacuum arc discharge elapses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M- Th with Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney G. McDonald
Primary Examiner
Art Unit 1753

RM
October 5, 2005